

CLAIMS

- 5 1. Use of a sugar ester to inhibit or reduce chemical interaction between an active ingredient substance and a carrier in a solid pharmaceutical formulation, wherein the active ingredient substance is susceptible to chemical interaction with the carrier.
- 10 2. Use of a sugar ester to inhibit or reduce chemical degradation of an active ingredient substance in a solid pharmaceutical formulation comprising the active ingredient substance and a carrier, wherein said active ingredient substance is susceptible to chemical interaction with said carrier.
- 15 3. Use as claimed in claim 1 or claim 2 wherein the sugar ester is cellobiose octaacetate.
4. Use as claimed in any one of claims 1 to 3 wherein the carrier is a reducing sugar.
5. Use as claimed in claim 4 wherein the carrier is lactose.
- 20 6. Use as claimed in any one of claims 1 to 5 wherein the ternary agent is present in an amount of from 0.1 to 20% w/w based on the total weight of the composition.
- 25 7. Use as claimed in any one of claims 1 to 6 wherein the active ingredient substance is present in an amount of from 0.01% to 50% w/w based on the total weight of the composition.
8. Use as claimed in any one of claims 1 to 7 wherein the drug substance is one which includes the group Ar-CH(OH)-CH₂-NH-R.
- 30 9. Use according to claim 8 wherein said drug substance is selected from:
 - 3-(4-{{(2R)-2-hydroxy-2-[4-hydroxy-3-(hydroxymethyl)phenyl]ethyl}amino}hexyl)oxy}butyl) benzenesulfonamide;
 - 3-(3-{{(2R)-2-hydroxy-2-[4-hydroxy-3-hydroxymethyl)phenyl]ethyl}-amino)heptyl]oxy}propyl)benzenesulfonamide;

4-<{(1*R*)-2-[(6-{2-[(2,6-dichlorobenzyl)oxy]ethoxy}hexyl)amino]-1-hydroxyethyl]-2-(hydroxymethyl)phenol and
4-<{(1*R*)-2-[(6-{4-[3-(cyclopentylsulfonyl)phenyl]butoxy}hexyl)amino]-1-hydroxyethyl]-2-(hydroxymethyl)phenol,

5 or a salt, solvate or physiologically acceptable derivative thereof.

10. Use as claimed in any one of claims 1 to 9 wherein the solid pharmaceutical formulation is for administration by inhalation.

10 11. Use as claimed in any one of claims 1 to 10 wherein the solid pharmaceutical formulation comprises two or more active drug substances

12. An inhalable solid pharmaceutical formulation comprising (a) an active ingredient substance susceptible to chemical interaction with lactose, (b) a carrier and (c) a ternary 15 agent that is a sugar ester.

13. An inhalable solid pharmaceutical formulation as claimed in claim 12 wherein the sugar ester is cellobiose octaacetate.

20 14. An inhalable solid pharmaceutical formulation as claimed in claim 12 or claim 13 further comprising one or more of the features described in any one or more of claims 4 to 11.

25 15. A method of reducing or inhibiting chemical interaction between an active ingredient substance and a carrier susceptible to chemical interaction, which comprises mixing a ternary agent which is a sugar ester with said active ingredient substance and said carrier.

30 16. A method of reducing or inhibiting chemical degradation of an active ingredient substance in a formulation comprising a carrier and an active ingredient substance, which method comprises mixing a ternary agent which is a sugar ester with said active ingredient substance and said carrier.

17. A method as claimed in claim 15 or 16 wherein the ternary agent is cellobiose octaacetate.

18. A method as claimed in claim 15 or 16 further comprising one or more of the features described in any one or more of claims 4 to 11.

19. Use of an inhalable solid pharmaceutical formulation as claimed in any of claims 12 to
5 14 for the manufacture of a medicament for the treatment of asthma, chronic obstructive pulmonary disease (COPD), chronic or wheezy bronchitis, emphysema, respiratory tract infection, upper respiratory tract disease or rhinitis, including seasonal and allergic rhinitis.

20. A method for treating asthma, chronic obstructive pulmonary diseases (COPD),
10 chronic or wheezy bronchitis, emphysema, respiratory tract infection, upper respiratory tract disease, or rhinitis, comprising administering to a patient in need thereof an inhalable solid pharmaceutical formulation as claimed in any of claims 12 to 14.

21. A method of preparing a solid pharmaceutical preparation comprising combining in
15 one or more steps: (a) an active ingredient substance susceptible to interaction with a carrier, (b) a carrier and (c) a ternary agent that is a sugar ester.